Consultation competence in general practice: establishing the face validity of prioritized criteria in the Leicester assessment package

R C FRASER

R K MCKINLEY

H MULHOLLAND

SUMMARY

Aim. *This study set out to test the face validity of prioritized criteria of consultation competence in general practice as contained in the Leicester assessment package.*

Method. *A questionnaire was sent to a geographically stratified random sample of 100 members of the United Kingdom Association of Course Organisers to seek their views on the categories, components and weightings contained in the Leicester assessment package and to determine the proportion of respondents who rejected or suggested a new category, component or weighting or reallocated components to other categories or amended weightings. Their views were sought on a six-point scale (strongly approve, approve, tend to approve, tend to disapprove, disapprove and strongly disapprove).*

Results. *There was a 73% response rate. Of the respondents 99% either strongly approved or approved of the overall set of categories of consultation competence. Only two respondents (3%) expressed any disapproval of individual categories. Thirty five of the 39 suggested components of consultation competence were supported by more than 80% of respondents. There was minimal support for excluding any categories or components of consultation competence, for moving any components to different categories or for the inclusion of new categories or components. Eighty eight per cent of respondents were in favour of the need to identify priorities between any agreed categories of consultation competence and 79% expressed approval of the suggested weightings. Although 42% of respondents indicated a wish for some alteration in weightings, the mean values for all consultation categories suggested by all respondents were almost identical to the original weightings in the Leicester package.*

Conclusion. *The face validity of the categories and components of consultation competence contained in the Leicester assessment package has been established, and the suggested weightings of consultation categories have been validated. Consequently, the criteria contained in the Leicester package can be adopted with confidence as measures against which performance can be judged in formative or summative assessment of consultation performance in general practice.*

R C Fraser, MD, FRCGP, professor of general practice and R K McKinley, MD, MRCP, MRCGP, senior lecturer in general practice, University of Leicester. H Mulholland, MA, PhD, senior lecturer in medical education, University of Dundee.

Submitted: 4 March 1993; accepted: 19 July 1993.

Keywords: consultation skills; clinical skills; communication skills; consultation process; vocational training assessment.

Introduction

ASSESSMENT of competence is a topical issue in general practice. The Joint Committee on Postgraduate Training for General Practice has made formative (educational) assessment mandatory in all phases of vocational training in general practice.[1] Furthermore, it has encouraged active experimentation with new methods of assessment, whether for formative or summative purposes.[1]

Formative assessment performs an educational function whereby learners and their teachers can determine the progress that has been achieved in meeting their objectives and can identify what remains to be learned in the future. Summative assessment is used to determine individuals' competence in order to decide whether or not they are fit to proceed from one stage of training to the next and, at the end of training, to assess whether or not they have acquired the attributes for independent practice (JCPTGP, Guidance on the requirements for regional and scheme accreditation).

Any new method of assessment must be 'valid, practicable, acceptable to the profession and of proved reliability'.[2] No single method of assessment currently satisfies these criteria.[3] Although a large proportion of trainees voluntarily sit the MRCGP examination, the Royal College of General Practitioners itself acknowledges that 'one area which gives most cause for concern is the lack of a clinical component'.[4] Furthermore, the new Manchester rating scale[5] is unpopular among trainers and trainees because of its perceived lack of utility.[6] Pilot trials of objective structured clinical examinations demonstrated that they were 'unrepresentative of "real world" general practice'.[4]

Any assessment process will need to test a range of attributes. Nevertheless an assessment must focus heavily on a doctor's clinical attributes, that is, the ability to perform satisfactorily in consultation with patients, since 'The essential unit of medical practice is ... a consultation and all else in the practice of medicine derives from it.'[7] Before appropriate methods of assessment — whether formative or summative — can be developed, agreed and implemented, an essential prerequisite must be the identification and acceptance of the criteria against which consultation competence will be measured. This paper describes one approach to the identification and validation of such criteria.

Leicester assessment package

The Leicester assessment package is the product of development work by R F, both in Leicester and Kuwait. It has been designed for both formative and summative purposes and includes seven prioritized categories of consultation competence (also included are an observer's recording form, criteria for the allocation of grades or marks and mark and feedback summary sheets; these components of the package are not being tested in this study). It can be used in both live and video-recorded consultations with real or simulated patients.

The seven categories of consultation competence which need to be mastered by a 'model' general practitioner (with relative weightings in brackets) are:

- Interviewing/history taking (20%)
- Physical examination (10%)
- Patient management (20%)
- Problem solving (20%)
- Behaviour/relationship with patients (10%)
- Anticipatory care (10%)
- Record keeping (10%)

The weightings represent our view of the relative importance of these categories and their component competences. Wherever possible these have been derived from published evidence. For example, there is considerable support for the over-riding importance of the history in clinical medicine.[8,9] Campbell[10] has reinforced the value of problem-solving skills and we agree with Marinker that 'It is the quality of thinking and not the quantity of facts that is likely to lead to a resolution of clinical problems.'[11] Furthermore, Peterson and colleagues found that one common factor accounted for 35% of the variance in allocated scores for consultation performance;[12] they identified this with scores for history taking and physical examination.

Thirty nine individual components of consultation competence have also been identified and allocated to the seven categories. Inevitably some overlap occurs between components of different categories. It will not be necessary or appropriate for a doctor to employ every one of the components in all consultations. Some will be required in every consultation (for example, the need to listen attentively, to maintain a friendly but professional relationship and to make an appropriate record) but others will be required only in a minority of consultations (for example, use of investigations, referral to hospital and opportunistic health promotion). Much will depend on the nature of the clinical challenge presented to or faced by the doctor. It is for this reason that any assessment of the overall consultation competence of a doctor must involve the monitoring of performance in a series of consultations.

Having gone through a number of modifications following use by many experienced general practice educators, it was felt that the validity, reliability and acceptability of the Leicester assessment package should be tested on a formal basis. The aim of this study was to test the face validity of the prioritized criteria of consultation competence as contained in the package.

Method

A detailed questionnaire was sent to a geographically stratified, random sample of 100 course organizers (associate advisers in Scotland) throughout the United Kingdom. This sample, drawn by an independent statistician, from the membership list of the UK Association of Course Organisers (442 members) contained the same proportions of course organizers as are distributed in three arbitrarily determined geographical groupings: southern England (48 out of 213), northern England (38 out of 165) and the rest of the UK (14 out of 64). There was one follow up of non-respondents by post after four weeks and any remaining non-respondents were contacted by telephone by the chairman of the UK Association of Course Organisers after a further four weeks.

The questionnaire sought the views of course organizers on the face validity of the seven categories, the 39 components of consultation competence and the suggested weightings. A test has face validity if it is perceived by experts to truly test — in this case — the consultation work of a general practitioner. Respondents were given the opportunity to respond to a series of statements or questions on a six point scale (strongly approve, approve, tend to approve, tend to disapprove, disapprove and strongly disapprove).

Respondents also had the opportunity to reject any of the proposed categories, components or weightings; to suggest additional categories or components; to state whether particular components should be reallocated to other categories; to give their opinion on the principle of prioritization; and to propose amendments to the suggested weightings.

Prior to distribution the questionnaire was tested in a local pilot study.

Results

The response rate was 73% after one postal and one telephone reminder. The proportion of respondents was similar in all sampling strata. Some respondents did not complete all parts of the questionnaire and the smaller denominators are shown where applicable.

The reactions of the respondents to the seven categories of consultation competence are shown in Table 1. There was overwhelming approval (99%) for the overall set of categories with only two respondents (3%) expressing any disapproval of individual categories. Only two respondents wanted to exclude any categories; 13 suggested additional categories but there was no consensus between them.

The responses to the 39 components of consultation competence are shown in Table 2 which reveals overwhelming approval of most components. Of the 39 components, nine were strongly approved or approved by 95–99% of respondents, 14 by 90–94% and 12 by 80–89%. The lowest approval rating (69%) was for 'Introduces self to patients'. Overall, only 1% of respondents' replies were in the categories tend to disapprove or disapprove and no respondent expressed strong disapproval of any component.

Eighty eight per cent of 65 respondents did not want to move any components of competence between the main categories and 71% did not suggest additional components. There was no consensus between the 29% of respondents who did suggest additional components. Indeed, 'Use of computer', suggested by three respondents, was the most common new suggestion.

Table 1. Response to proposed categories of consultation competence.

	% of respondents (n = 73)			
Consultation category	Strongly approve	Approve	Tend to approve	Tend to disapprove/ disapprove/ strongly disapprove
Interview/history taking	75	25	0	0
Physical examination	47	49	4	0
Patient management	71	25	3	1
Problem solving	71	26	3	0
Behaviour/relationship with patients	71	26	3	0
Anticipatory care	48	36	15	1
Record keeping	49	42	8	0
Overall	66	33	1	0

n = total number of respondents.

Table 2. Response to individual components of consultation competence.

Category/component	% of respondents (n = 73)			
	Strongly approve	Approve	Tend to approve	Tend to disapprove/ disapprove/ strongly disapprove
Interview/history taking				
Allows patients to elaborate presenting problems fully	75	23	1	0
Identifies patients' reasons for consultation	82	16	1	0
Listens attentively	82	15	1	1
Puts patients at ease	66	29	5	0
Recognizes patients' verbal and non-verbal cues	66	29	4	1
Uses silence appropriately	55	40	4	1
Phrases questions simply and clearly	51	40	10	0
Considers physical, social and psychological factors as appropriate	60	29	8	3
Seeks clarification of words used by patients as appropriate	41	45	14	0
Elicits relevant and specific information from patients and/or their records to help distinguish between working diagnoses	45	40	15	0
Exhibits well-organized approach to information gathering	38	40	19	3
Introduces self to patients	36	33	27	4
Physical examination				
Uses the instruments commonly used in general practice in a selective, competent and sensitive manner	44	47	10	0
Performs examination and elicits physical signs correctly and sensitively	48	42	8	1
Patient management				
Formulates management plans appropriate to findings and circumstances in collaboration with patients	71	25	4	0
Checks patients' level of understanding	58	36	4	4
Makes discriminating use of investigations, referral and drug therapy	60	33	5	1
Arranges appropriate follow up	49	38	12	0
Demonstrates understanding of the importance of reassurance and explanation and uses clear and understandable language	68	19	10	3
Is prepared to use time appropriately	49	38	11	1
Attempts to modify help-seeking behaviour of patients as appropriate	33	41	25	1
Problem solving				
Correctly inteprets and applies information obtained from patient records, history, physical examination and investigations	55	41	4	0
Generates appropriate working diagnoses or identifies problem(s) depending on circumstances	55	37	7	1
Is capable of recognizing limits of personal competence	64	27	5	3
Seeks relevant and discriminating physical signs to help confirm or refute working diagnoses	49	38	10	1
Is capable of applying knowledge of basic, behavioural and clinical sciences to the identification, management and solution of patients' problems	48	36	15	1
Behaviour/relationship with patients				
Conveys sensitivity to the needs of patients	63	30	5	1
Demonstrates an awareness that the patient's attitude to the doctor (and vice versa) affects management and achievement of levels of cooperation and compliance	57	34	5	3
Maintains friendly but professional relationship with patients with due regard to the ethics of medical practice	52	36	11	1
Anticipatory care				
Acts on appropriate opportunities for health promotion and disese prevention	36	49	15	0
Provides sufficient explanation to patients for preventive initiatives taken	36	48	15	1
Sensitively attempts to enlist the cooperation of patients to promote change to healthier lifestyles	41	38	19	1
Record keeping				
Makes accurate, legible and appropriate record of every doctor–patient contact and referral	60	33	7	0
The minimum information recorded should include:				
Date of consultation	81	16	3	0
Relevant history and examination findings	63	32	4	1
If a prescription is issued, the name(s) of drug(s), dose, quantity provided and special precautions intimated to the patient should be recorded	53	41	3	3
Any measurement carried out, eg blood pressure	66	27	7	0
The diagnosis/problem	63	27	8	1
Outline of management plan, investigations ordered and follow-up arrangements	49	37	12	1

n = total number of respondents.

To determine the respondents' opinions about the principle of prioritization of categories of consultation competence their views were sought about the statement 'If consultation competence is to be formally assessed some attempt must be made to identify relative priorities between any agreed categories of component consultation competence.' Of 67 respondents 64% either strongly approved or approved of the statement. This proportion rose to 88% when those who tended to approve were included. Only one respondent expressed strong disapproval of the statement.

When asked to approve or disapprove of the suggested weightings 40% of 72 respondents strongly approved or approved, rising to 79% when respondents who tended to approve were included. Only two respondents strongly disapproved of the suggested weightings.

When offered the opportunity to change the allocation of weightings between categories of consultation competence, a majority (58%) elected not to do so. Table 3 demonstrates the high degree of agreement between the original weightings and those suggested by respondents, particularly for interview/history taking, physical examination, patient management and problem solving. An increase in the weighting allocated to behaviour/relationship with patients was suggested by 27% of respondents and a reduction of the weightings of anticipatory care and record keeping by 14% and 11% of respondents, respectively.

Discussion

These data provide an overwhelming endorsement of the face validity of the seven categories and the 39 components of consultation competence as contained in the Leicester assessment package. Indeed, 99% of respondents expressed approval of the overall set of consultation categories and only one category (anticipatory care) was strongly approved or approved of by less than 92% of respondents. Furthermore, few respondents expressed any disapproval of the 39 components of consultation competence and there was no consensus for including any new components. Although one component, 'Introduces self to patient' received less than 70% approval it has not been removed. The Leicester assessment package is primarily intended for formative and summative assessment of vocational trainees who will frequently be consulted by patients they do not know. It is important therefore that these doctors introduce themselves to such patients.

Table 3. Comparison of the original weightings for categories of consultation competence and those suggested by 72 respondents.

Consultation category	Original weightings (%)	Weightings suggested by respondents (%)[a] Mean	Range	Standard deviation
Interview/history taking	*20*	*20.4*	*10–35*	*3.1*
Physical examination	*10*	*10.0*	*5–20*	*2.2*
Patient management	*20*	*19.3*	*10–25*	*2.1*
Problem solving	*20*	*19.5*	*15–30*	*2.4*
Behaviour/relationship with patients	*10*	*11.8*	*0–25*	*4.4*
Anticipatory care	*10*	*9.4*	*5–15*	*1.8*
Record keeping	*10*	*9.8*	*5–15*	*2.0*

[a]Collation of new weightings suggested by respondents and the original weightings approved by respondents who did not suggest any changes.

The inclusion of weightings of categories of consultation competence, a feature unique to the Leicester package, is its most contentious element. There was, however, overwhelming acceptance (88%) of the principle of weighting of categories of consultation competence. Although there was less agreement about the proposed weightings in the package, a clear majority of respondents accepted them (79%). The increased weighting of behaviour/relationship with patients suggested by respondents was largely at the expense of decreased weighting of anticipatory care. Weightings cannot be precisely allocated to categories of consultation competence and our weightings are a pragmatic decision using available evidence.[8-12] Taking into account the views of all respondents, high degrees of agreement were achieved between the original weightings and those put forward by the respondents. Consequently, we feel that the weightings proposed have been validated.

Although the Leicester assessment package was devised using a different methodology from the rating scales of Hayes[13] and Cox and Mulholland,[14] there are similarities between the components of the Leicester package and the other assessment scales. However, the Leicester package has advantages in that it has been validated by the population of course organizers in the UK, unlike the Hayes scale, and it is prioritized and includes both behavioural and professional components, unlike both the Hayes and Cox and Mulholland scales. Furthermore, the Leicester package is 'user friendly' as it has been employed in the clinical assessment which forms the major part of the examination for the diploma in family practice (RCGP/Kuwait) which has been taken in Kuwait since 1987.

The criteria of consultation competence as contained in the Leicester package (seven categories and 39 components) have been field tested by exposure to the scrutiny of experts and found to achieve a high degree of face validity. Overwhelming support was forthcoming for the principle that whatever assessment procedure is used some attempt must be made to identify relative priorities between any agreed categories of consultation competence. Although a smaller proportion of respondents expressed approval of the suggested weightings this represents a high degree of consensus as a negligible proportion expressed outright opposition. The criteria contained in the Leicester assessment package can be adopted with confidence as the measures against which performance can be judged in formative or summative assessment of consultation performance in general practice.

The next phase of our research is to assess the reliability of the whole package when used by multiple observers/assessors.

References

1. Joint Committee on Postgraduate Training for General Practice working party on assessment. *The interim report of the working party on assessment.* London: JCPTGP, 1992.
2. Carney T. A national standard for entry into general practice [editorial]. *BMJ* 1992; **305:** 1449-1450.
3. Maguire P. Assessing clinical competence [editorial]. *BMJ* 1989; **298:** 4-5.
4. Tombleson P. Current and future concerns. In: Lockie C (ed). *Examination for membership of the Royal College of General Practitioners (MRCGP). Occasional paper 46.* London: RCGP, 1990.
5. Centre for Primary Care Research, Department of General Practice, University of Manchester. *Rating scales for vocational training in general practice. Occasional paper 40.* London: Royal College of General Practitioners, 1988.
6. Campbell LM, Murray TS. Trainee assessment — a regional survey. *Br J Gen Pract* 1990; **40:** 507-509.
7. Spence J. *The purpose of medicine.* Oxford University Press, 1960.

8. Hampton JR, Harrison MJE, Mitchell JRA. Relative contributions of history taking, physical examination and laboratory investigation to diagnosis and management of medical outpatients. *BMJ* 1975; **2:** 486-489.
9. Sandler G. Costs of unnecessary tests. *BMJ* 1979; **2:** 21-24.
10. Campbell EJM. The diagnosing mind. *Lancet* 1987; **1:** 849-851.
11. Marinker M. Whole person medicine. In: Cormack J, Marinker M, Morrell D (eds). *Teaching general practice.* London: Kluwer Medical, 1981.
12. Peterson OL, Andrews LD, Spain RS, Greenberg BG. Analytical study of North Carolina general practice. *J Med Educ* 1956; **31:** 2-11.
13. Hayes RB. Assessment of general practice consultations: content validity of a rating scale. *Med Educ* 1990; **24:** 110-116.
14. Cox J, Mulholland H. An instrument for assessment of videotapes of general practitioners' performance. *BMJ* 1993; **306:** 1043-1046.

Acknowledgements

We acknowledge the assistance provided by the participating course organizers, the Association of Course Organisers and, in particular, its chairman, Dr Eric Gambrill, and Dr Carol Jagger for drawing the sample. Further advice was provided by Dr Ale Gercama, Mr Gerritt van Staveren and Dr Jonathan Shapiro. The study was supported by a grant from the Scientific Foundation Board of the Royal College of General Practitioners.

Address for correspondence

Professor R C Fraser, Department of General Practice, University of Leicester, Leicester General Hospital, Gwendolen Road, Leicester LE5 4PW.